Appl. No. 10/790,981
Amdt. dated June 2, 2008
Reply to Office Action of April 21, 2008

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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1.    (Currently amended)  A method of determining the position of a synchronization pattern in a serial stream of incoming data comprising the steps of:

selecting a first position from a first plurality of possible positions;

testing the first selected position;

if the first selected position is not correct, selecting a second position from a second plurality of possible positions, wherein each of the second plurality of possible positions comprises each of the first plurality of possible positions shifted by one position unit; and

~~wherein the selected second position is used to determine~~ determining the position of the synchronization pattern in the serial stream of incoming data using the selected second position.

2.    (Previously presented)        The method of claim 1, further comprising the steps of:

testing the second selected position;

if the second selected position is not correct, selecting a third position from the first plurality of possible positions,

wherein the first plurality of possible positions does not include the first position.

3.    (Original)      The method of claim 1, wherein the testing step includes:

rotating a segment of the serial stream of data so that the synchronization pattern is at a predetermined position.

4.    (Previously presented)        The method of claim 3, further comprising the steps of:

selecting a portion of the rotated segment;

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selecting a portion of a previous rotated segment; and

combining the selected portions to form an output segment of the serial stream of data, wherein the output segment is longer than the rotated segment.

5.    (Original)    The method of claim 4, wherein the output segment of the serial stream of data comprises synchronization patterns at fixed positions.

6.    (Previously presented)    The method of claim 4, further comprising the steps of:

incrementing a first counter if the output segment contains a synchronization pattern at a predetermined position; and

incrementing a second counter if the output segment does not contain a synchronization pattern at the predetermined position.

7.    (Previously presented)    The method of claim 6, further comprising determining a state of synchronization as a function of the first and second counters.

8.    (Original)    The method of claim 1, wherein the step of selecting includes determining a subset of the first plurality of possible positions as a function of a segment of the serial stream of data.

9.    (Original)    The method of claim 8, wherein the step of selecting includes determining a subset of the first plurality of possible positions as a function of a previous selection.

10.    (Previously presented)    A device for determining the frame boundaries of serialized framed data, the device comprising:

a serial to parallel converter for converting the serialized framed data to a parallel framed data;

a guesser for guessing a position of a frame boundary in the parallel framed data;

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a rotator for rotating the parallel framed data in accordance with the position guessed by the guesser;

a register for storing a delayed version of the rotated parallel framed data;

a selector for selecting a portion of the rotated parallel framed data and a portion of the delayed version of the rotated parallel framed data to form a data output;

a tester for testing the data output to determine if the frame boundary is at a predetermined position in the data output;

a counting mechanism for counting when the frame boundary is at the predetermined position in the data output; and

a state machine, the state machine determining if the device is in a state of synchronization based on the counting mechanism.

11. (Previously presented)     The device of claim 10 further comprising:

an exhaust register, the exhaust register storing one or more positions guessed by the guesser determined not to contain a frame boundary.

12. (Previously presented)     The device of claim 11, wherein the guesser excludes the one or more positions stored in the exhaust register as possible positions of the frame boundary.

13. (Previously presented)     The device of claim 10, further comprising:

a shifter for shifting the parallel framed data by an odd number of bits; and

a selector for selecting the parallel framed data or the parallel framed data shifted by the odd number of bits, wherein the selected data is provided to the rotator.

14. (Previously presented)     The device of claim 13, wherein the odd number of bits is one.

15. (Previously presented)     The device of claim 10, wherein the serialized framed data comprises a plurality of frames, each frame comprising a data field and a synchronization pattern.

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16.     (Previously presented)          The device of claim 15, wherein the data field comprises 64 bits and the synchronization pattern comprises two bits.

17.     (Previously presented)          The device of claim 10, wherein the serialized framed data is 10 Gb Ethernet data.

18.     (Previously presented)          The method of claim 1, wherein the serial stream of data comprises a plurality of frames, each frame comprising a data field and a synchronization pattern.

19.     (Previously presented)          The method of claim 18, wherein the data field comprises 64 bits and the synchronization pattern comprises two bits.

20.     (Previously presented)          The method of claim 1, wherein the serial stream of data is 10 Gb Ethernet data.